

REMARKS

Reconsideration of the present application is requested. Claims 1-34 are pending, with claims 24-31 being withdrawn from consideration. Claim 1 remains generic to all of species I – IV. Upon allowance of claim 1, Applicants request rejoinder of claims 24-31.

ALLOWABLE SUBJECT MATTER

Applicants appreciate the Examiner's indication of the allowable subject matter defined by claims 5, 7 and 22. Applicants appreciate the allowance of claims 32-34.

PRIORITY DOCUMENTS

The Office Action still indicates that certified copies of the priority documents have been received from the International Bureau. However, as previously explained, Applicants filed a Priority Letter along with a certified copy of priority document 10-2003-0037137 on January 14, 2005.

Accordingly, Applicants request the Examiner re-check the file and indicate the correct manner in which the Priority Document was received in the next PTO correspondence.

PRIOR ART REJECTIONS

Rejection Under 35 U.S.C. § 103(a)

The Examiner rejects claims 1-4, 6, 8-21 and 23 under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 5,943,099 ("*Kim*"). Applicants traverse this rejection.

The method of claim 1 requires, "selectively performing one of at least two interlaced-to-progressive conversion (IPC) techniques on input interlaced scan data based on a received control command, one of the at least two IPC techniques generating at least one scan line of including spatio-temporal pixel values, each spatio-temporal pixel value being a combination of a spatially interpolated pixel value and a temporally interpolated pixel value." Such a method is not disclosed or fairly suggested by *Kim*.

In the conversion device of *Kim*, a correlator 130 detects a motion correlation DM, a vertical direction correlation DV and a temporal-vertical correlation DT from the input interlaced image signal. The correlations DM, DV and DT are output to a selector 140. The selector 140 compares the motion correlation DM, the vertical correlation DV and the temporal-vertical correlation DT with predetermined constants TM, T1 and T2, respectively.

The selector 140 selects one of a spatially interpolated signal IS output from the spatial interpolator 110 or a temporally interpolated signal IT output by the temporal interpolator 120 based on the compared results. The selected signal is output by the selector 140 as an interpolated signal Vout.

Contrary to the method of claim 1, in the conversion device of *Kim*, the selector 140 selects *one of* a spatially interpolated signal I_s or a temporally interpolated signal I_t based on a comparison between motion correlation DM , vertical correlation DV and temporal-vertical correlation DT with predetermined constants. No combining of these separately interpolated signals or spatial and temporal pixel values is performed. Thus, *Kim* does not disclose or fairly suggest "generating at least one scan line of including spatio-temporal pixel values, each spatio-temporal pixel value being a combination of a spatially interpolated pixel value and a temporally interpolated pixel value," as required by claim 1. Therefore, *Kim* fails to disclose or fairly suggest all features of claim 1. For at least the foregoing reasons, claim 1 is patentable over *Kim*. Claims 2-4 and 6 are patentable over *Kim* at least by virtue of their dependency from claim 1.

Claim 8 requires, "a conversion structure configured to generate different streams of scan data from input interlaced scan data, the different streams of scan data representing conversion of the input interlaced scan data into portions of progressive scan data according to different IPC conversion techniques, one of the different streams including spatio-temporal pixel values, each spatio-temporal pixel value being a combination of a spatially interpolated pixel value and a temporally interpolated pixel value," and thus, claim 8 is patentable over *Kim* for at least reasons somewhat similar to those set forth above with regard to claim 1. Claims 9-21 and 23 are patentable over *Kim* at least by virtue of their dependency from claim 8.

Response to Examiner's Rebuttal Arguments

In response to Applicants arguments against the Examiner's rejection, the Examiner states:

It is noted that the claimed "combination" can be anticipated by the selection of Kim because the selector 140 combines the outputs of the spatial interpolator 110 and the temporal interpolator 120. It is further noted that the time-divisional multiplexer using switch to combine inputted signals.

Office Action at 2-3.

Applicants disagree with this statement. According to column 4, lines 2-5, the selector 140 "selects a signal Is output by the spatial interpolator 110 **or** a signal It output by the temporal interpolator 120 on the basis of the compared results as an interpolated signal Vout." The use of 'or' in this portion of Kim is an explicit indication that *one of* the spatially interpolated signal and the temporally interpolated signal is selected for output. Nowhere does Kim disclose or suggest that the spatially interpolated signal Is and the temporally interpolated signal It are *combined* in anyway. Kim discloses selecting only *one of* signals Is and It for output.

Further, Kim does not disclose or fairly suggest combining the spatially interpolated signal Is and the temporally interpolated signal It on a per pixel value basis to generate a spatio-temporal pixel value. Kim discloses outputting one or the other, but not a combination of the two.

Even further still, Applicants fail to understand how the Examiner rationalizes that the selection performed by the selector 140 in Kim constitutes "generating at least one scan line of including spatio-temporal pixel values,

each spatio-temporal pixel value being a *combination* of a spatially interpolated pixel value and a temporally interpolated pixel value," as required by claim 1. Kim explicitly discloses interpolating the input image signal temporally *or* spatially, but not a combination of the two. See Kim at 4:2-4:5, 4:15-4:21, 6:50-6:62, 7:33-7:37.

For at least the foregoing reasons, Applicants respectfully submit that claim 1 is patentable over Kim. Claim 8 is patentable over Kim for at least somewhat similar reasons. Claims 2-4 and 6 are patentable over *Kim* at least by virtue of their dependency from claim 1. Claims 9-21 and 23 are patentable over *Kim* at least by virtue of their dependency from claim 8.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of the pending claims is earnestly solicited.

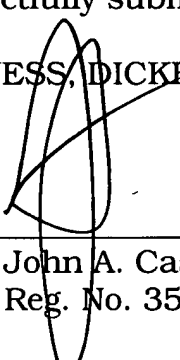
If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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